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**ARTICULATION BETWEEN HIGH SCHOOL
AND COLLEGE**

ALONZO F. MYERS, *Issue Editor*

- | | | |
|---|-----------------------------|-----|
| A Time for Action | <i>Alonso F. Myers</i> | 193 |
| High School-College Articulation | <i>Carroll V. Newsom</i> | 195 |
| Articulation of General Education Programs | <i>Albert E. Meder, Jr.</i> | 202 |
| Better Articulation between Secondary School and
Community College | <i>Lawrence L. Bethel</i> | 208 |
| Better Counseling and Selection for College | <i>Walter H. Wolff</i> | 216 |
| Co-operation of Secondary School and Colleges in
Acceleration of Gifted Students | <i>Morris Meister</i> | 220 |
| Better Articulation for General Education Programs | <i>Theodore D. Rice</i> | 228 |

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A TIME FOR ACTION

(An Editorial)

It is an encouraging indication of awareness of the seriousness of the problem that so much attention is being given to ways of improving the articulation between secondary school and college. It is not encouraging, however, to note the great resistance on the part of both secondary school and college teachers and administrators to proposals looking toward improved articulation.

Secondary school people quite generally oppose early admission to college of their most gifted high school students, in spite of the clear evidence that such students do well academically and socially in college. The high schools prefer to keep these bright boys and girls in high school for the full four years.

The colleges tend to be hostile toward granting college credit, or advanced standing, to gifted high school graduates, in spite of clear evidence in support of this practice under properly controlled conditions. The tendency still persists to insist that nothing of consequence can be learned in high school. The result is that many of our most promising and gifted college freshmen are required to take courses in which they already are proficient. They become disillusioned with college and frequently drop out after one or two years. The kindest thing to be said about this practice is that it represents a great waste of time.

The senior high school and the lower division of college share the major responsibility for general education. The student has his general education interrupted at about mid-point through graduation from high school and entrance to college. This would almost surely result in poor articulation, even if the secondary schools and the colleges were trying much harder than they are to improve the articulation.

Many educators have long advocated a reorganization of the educational "ladder" that would reduce the number of articulation

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points and that would recognize the primary responsibility of public school systems for the area known as general education. Such a reorganization would result in a 6-4-4 organization: a six-year elementary school, a four-year secondary school, and a four-year community college.

Thus young people would be able to acquire the first two years of a college education tuition-free while living at home. Terminal vocational curricula, as well as the first two years of liberal arts would be offered. A few communities, chiefly in the western states have adopted the 6-4-4 plan, and generally it has worked well. To date there has been little indication of likelihood of widespread adoption of the idea. A combination of vested interests and inertia appear to have effectively prevented the idea from spreading, or even from being seriously considered.

It would appear that under present and clearly foreseeable conditions it is almost imperative that a reorganization of the educational "ladder" should receive the active consideration of professional and lay groups. It is difficult to see how needs of our society for greatly increased education and training for our citizens, as well as the need for providing educational opportunity for the greatly increasing number of American youth, can be met without such a fundamental reorganization of the American public school system.

ALONZO F. MYERS

HIGH SCHOOL-COLLEGE ARTICULATION

Carroll V. Newsom

About three years ago a committee composed of representatives of the faculties of three preparatory schools, Andover, Exeter, and Lawrenceville, and three universities, Harvard, Princeton, and Yale, described their mutual problem in the following words: "The real need is a concerted attempt on the part of both schools and colleges to enable students to move steadily forward through a coherent and unified program of study, with a continuous desire to learn and at a rate commensurate with their ability."

Such a statement might well serve as the theme for this conference, for it is an excellent presentation of the real meaning of high school-college articulation. Unfortunately, any attempt to implement the suggested program encounters difficulties that involve the very fundamentals of educational organization and philosophy. In fact, as one who has struggled personally with the problems of high school-college articulation, I must warn that no elementary solutions are to be anticipated. It is an interesting fact that any analysis of the apparently simple subject of this paper seems to reopen many of the controversies with which educators generally are familiar.

Our discussion, in the first instance, must be concerned with the present organization of American education. The first twelve years of a person's schooling are under one type of jurisdiction, and any further educational endeavor is within the framework of another type of administration. As we all know, the first twelve years are further organized into a so-called "8-4 plan" or a "6-3-3 plan"; the four-year undergraduate college program may be split into a 2-2 type of organization; and so on. I call your attention to this situation because the problems of high school-college articulation are occasioned by a specific organizational break that is reflected in an interruption of the coherence and unity of our educational effort; similar breaks with their attendant educational consequences occur, perhaps to a lesser extent, when a student moves from elementary school to junior high school or from junior college to senior college.

No one would argue that abrupt changes invariably take place in a student's intellectual and emotional characteristics from the time he completes one of these educational units until he starts the next one, that is, during a summer vacation. Yet, our total edu-

cational program, considering both the content and the methodology employed, would seem to be created on such an assumption. Recently I audited a discussion of the program of the junior high school; it seemed to be inherent in the deliberations that students entering junior high school suddenly develop special motivations and needs, and the curriculum should be designed accordingly. Not a single reference was made to the program that precedes or to the one that follows. In a similar manner, it is common for secondary educators and for college educators to give consideration to their respective educational units as if they are essentially autonomous enterprises. Although it is now well known that the growth and development of a person, mentally, physically, and emotionally, take place at an accelerated pace during some periods of his history, the fact remains that the curve of such growth is continuous; certainly man's growth curve is not composed of a collection of disjointed steps. Why we have not recognized this fact to greater extent in considering the organizational pattern of American education remains for us the sixty-four dollar question. Obviously, the present situation to great extent is the result of "historical accident"; its continuation, however, is caused partially by the circumstance that too many of the teaching and administrative personnel of our schools and colleges are mere specialists; they do not have the breadth of background and the vision to indulge in analytical studies of our total educational program. It is doubtful for many reasons that we should anticipate any early adjustment of the organizational structure of American education, but we can take definite steps to minimize the artificial barriers that such an organization introduces.

In the second place, any discussion of high school-college articulation must give attention to the great complexities introduced into our educational effort, especially on the secondary level, by the great variety of students' abilities, interests, and objectives. In fact, no educator must ever forget that his students are typified not by their uniformity but by their diversity. It is acknowledged generally that the ideal educational system would be one that provides each individual student an opportunity to proceed according to the laws of his own mind to the attainment of his maximum potential as a citizen and as a creator. However, it is inevitable that such an ideal plan must be subject to considerable modification as the result of numerous factors, many of them of economic origin. In addition to the economic factors, educators have been forced to contend with prejudices that are based on false interpretations of the American concept of "equality of opportunity." This element in the

situation has been described very well by Hollinshead in his book *WHO SHOULD GO TO COLLEGE?* He writes that the existing educational program in this country "is concrete evidence of the deep concern among Americans for a fluid, casteless society, in which it should be made possible for everyone to proceed as far as his perseverance and abilities will carry him. We do not, therefore, accept the notion that students can be sorted early and then trained for the niche in life that is right for them. If we did, our educational problems would be much simpler. The consequence of this is that American education, unlike European, has tried to avoid much early separation of students by abilities, expectations, or special aptitudes. . . . American tradition requires similar opportunities for all, while educational efficiency would gain, at least to some degree and depending upon the educational level, by differentiation."

Even if we attempt to simplify the complex problem of differentiation between high school students by considering only the needs of those who are preparing for college as contrasted with the requirements of those seeking an education for immediate employment, history reveals that no genuine solution of the issue has been found. The "Report of the Harvard Committee," issued in 1945, is illuminating on this point. This particular report pointed out that "In the seventy years between 1870 and 1940, while the general population was increasing three times over, the enrollment of high schools was being multiplied about ninety times and that of colleges about thirty times." But, as the Report asserts, the change that took place was more than one of numbers. In 1870, three-fourths of those who attended high school went on to college, so the high school function was clear; "it was quite simply to prepare for college." On the other hand, in 1940 only one-fourth of our high school students ultimately attended college, whereas three-fourths took jobs at the conclusion of their high school courses. The Harvard Committee commented upon this situation in the following words:

"The ninetyfold increase in numbers observed above, a convulsion as powerful as an earthquake, was of course the controlling fact. But had this increase, vast as it has been, meant simply a ninetyfold multiplication of the old plan and kind of schooling, it would have been comparatively minor. Far outshadowing in importance this mere numerical increase is the gradual change which it has brought about in the whole character of the high school and in its function toward American society."

This adaptation of the American high school to the most urgent demands of our society can hardly be criticized. But, at the same

time, it is unfortunate that educators concerned with the secondary schools have been able to provide only limited answers to the very fundamental question, so well phrased in the Harvard Report: "How can the interests of the three-fourths (of high school students) who go on to active life be reconciled with the equally just interest of the one-fourth who go on to further education?"

As a parenthetical comment, although it is of considerable significance to the present discussion, may I call attention to the fact that the per cent of high school graduates going on to college has been increasing in recent years at a very rapid rate. The twenty-five per cent specified in the Harvard Report for the years 1945 is no longer valid; the figure for New York State has now passed forty-two per cent. An executive of one of our leading educational foundations indicated a few weeks ago that the rate would probably exceed fifty percent in a very few years and it might even reach sixty percent.

There is little doubt that the secondary schools are now confronted with tremendous difficulties, including a rapidly growing student body and an intolerable shortage of teachers, and they are being subjected to conflicting pressures of considerable magnitude; in fact, it is virtually impossible for high school administrators to chart a course of action. Nevertheless, I must express my personal conviction that the high schools should now give very serious and special attention to the needs of those students who will continue to college. My belief is founded not so much on the fact of the increasing percent of high school graduates going to college as it is on the increasing educational demands of the professions. Specifically, no longer is it possible for the colleges to allocate time for making up "deficiencies" in the educational background of their students, for the college graduate is now expected to have attained a level of achievement that is considerably higher than it was just a few years ago. The only alternative to my position, as I see it, is an increase in the length of time required for professional preparation. This undesirable alternative is already being considered in several professional areas.

After much consideration of the problem and after some experimentation with possible solutions, I should like to suggest that the dilemma of the high school with respect to the needs of the college-preparatory group and to the requirements of the non-college group might be resolved if we would be willing to accept certain propositions. For instance, if high school students expecting to take jobs after graduation need as a minimum requirement subjects indicated symbolically by A, B, and C in the field of English, then I assert my personal belief that college preparatory students must certainly have

subjects A, B, and C; in addition, the latter group should probably have as a special, minimum college requirement some array of subjects in English such as D and E. A similar statement could be made of the fields of mathematics, the natural sciences, the social sciences, and the languages. Inherent in my statement, of course, is the non-acceptance of most special courses in the various subject matter fields for various groupings of students, such as business English, consumer mathematics, and science for everyday living; this statement does not apply to a limited number of courses in distinctly vocational areas. If students not going to college need business English and consumer mathematics, then it would appear to me that those who do go will certainly need the same knowledge.

Assuming the acceptability of such a proposition, it would then be possible to create in each school a series of sections in each subject matter field, starting at the same point upon the same curriculum, but covering the material at different rates. Students would be assigned to sections on the basis of apparent ability, but under the assumption that some students would later be shifted to sections of differing pace in those cases where the first allocation to sections proved undesirable. Under such a flexible scheme, with which I have experimented on the college level, there would be considerable variation in the amount of material covered in any particular field by the various sections of students; most important, however, is the fact that our young people would be challenged in a manner somewhat compatible with their ability. Moreover, it would not be so necessary for students in the early years of high school to make decisions in regard to college attendance and upon the choice of a profession. In fact, the encouragement that a student would receive to attend college as well as his preliminary choice of a specialty in college would depend heavily upon the nature of his high school accomplishment.

It is my considered judgment that such a device as I have just suggested is practical, and I believe that it provides a partial answer to many of the problems besetting the high school. In addition, it provides for a type of flexibility in individual accomplishment that I regard as prerequisite to a destruction of the educational discontinuities that are associated with the organizational breaks already discussed. That is, I would start moving students out of high school into college whenever individual patterns of achievement would permit it; this is essential for any complete solution of the problems involved in high school-college articulation.

It should now be clear that one cannot treat adequately the subject of this paper without considering some very fundamental con-

cepts in the field of education. In addition, however, some specific suggestions, such as those that follow, may be made toward the resolution of some aspects of the problem under consideration.

Definite steps must be taken to enable personnel of the colleges to become acquainted with the problems of the secondary schools, and vice versa. Programs of intervisitation have been carried out with mutual profit in New Jersey, in New York State, and elsewhere. It also is important to note that considerable mutual understanding has been a byproduct of the activities of those professional organizations that provide equal privileges and opportunities to college and to high school staff members.

It is essential, also, that better programs of guidance be created for students in both the secondary schools and the colleges and that closer liaison be established between student personnel officers upon the two levels. Too frequently at the present time the hopes and ambitions of our students are founded upon whim and not upon a realistic appraisal of their abilities. The heartaches and frustrations suffered by many students as a result of faulty and inadequate guidance are quite unnecessary.

Perhaps even more significant, however, than some of the previous suggestions, is the urgent necessity for better articulation between the colleges and the high schools in the various subject matter areas, especially in English and in mathematics. A few years ago, after making a serious study of this problem in the field of mathematics, I wrote, "I possess a growing conviction that many competent teachers in our high schools are literally working to exhaustion in their attempts to perfect procedures and to teach concepts that are comparatively meaningless insofar as the future careers of their students are concerned."

The situation depicted in this quotation reveals a tragic lack of discrimination on the part of many teachers in regard to the relative importance of the many concepts that may be treated in the classroom. In fact, I am reminded of the following statement in the book, *EDUCATIONAL PSYCHOLOGY*, by Cole and Bruce: "(The teacher) has a twofold responsibility: first, as a guide in passing *on* the culture, seeing that the beliefs and values of the community and the nation become known by the young generation; second, that of *passing on* the culture, of guiding the critical selection and interpretation of the manifold phases of the culture itself."

The articulation that I envision between the high school classroom and the college classroom in such fields as English and mathematics simply involves the development of "coherent and unified programs of study" in those subject-matter areas for the high school and college

levels. There is little justification for the fact that a person who has been a good student of high school English, for example, may frequently find himself in a strange world when he registers for a college course in the same subject. Without destroying the individuality of each teacher's presentation, there must be greater agreement between high school and college instructors upon those concepts that are truly basic in the total framework of knowledge; such agreement must then lead to some assignments of responsibility to teachers upon the various academic levels. My hopes in this regard cannot be realized through a few scattered efforts; the subject-matter articulation that is desirable requires serious and systematic study on the part of both high school and college teachers, meeting as equals in the resolution of their problems.

To inaugurate and then to maintain the program of better subject-matter articulation that I am advocating, in addition to the organized efforts that I have recommended, there exists a distinctive challenge to our college professors, who, in the first instance, are the educators of the high school teachers. I shall always recall with satisfaction the rejoinder of a secondary teacher at the conclusion of a certain college professor's tirade upon the inadequacies of high school teaching; meekly and reflecting genuine perplexity, someone in the audience asked, "But, how can this be? We are your students." Obviously there is great merit in the proverb: "Teachers teach as they were taught and not as they were taught to teach." Courses in high school methods, inadequate as they may be in the opinion of some critics, are continually negated by the thoroughly dismal displays of teaching that are found too frequently in college classes. Also, there is little doubt in my mind that college professors must give renewed attention to the questions, "To what concepts should we give major attention in the college program, and how should these concepts be presented?" The importance for this discussion of obtaining sound answers to these two questions on the college level would seem to be obvious, for the nature of the reply will determine ultimately the content of the high school program as well as the type of exposition that is undertaken in the high school classroom, notwithstanding text books, syllabi, and the like. These latter tools of our profession do change, you know, when there is an atmosphere conducive to such change.

I know that you agree with me that no subject is of greater significance in the improvement of our future educational accomplishment than that of better high school-college articulation. It deserves even more attention than it is receiving.

Carroll V. Newsom is Executive Vice-Chancellor, New York University.

ARTICULATION OF GENERAL EDUCATION PROGRAMS

Albert E. Meder, Jr.

ARTICULATION IS NO CURE-ALL

I would like to begin by pointing out that when we discuss articulation, particularly of content subjects, we have in mind the notion of continuity, not necessarily that of smoothness. Two line segments meeting at a sharp angle are articulated. There is continuity in that situation; one can draw the two lines without removing his pencil from the paper. It is not, however, "smooth" in the sense in which we draw a smooth unbroken curve through a succession of dots. In mathematical terms, both configurations are continuous, but the first lacks a continuously turning tangent. There is a sudden break, not in the curve, but in the slope.

I think this is a true analogy of the situation between school and college. Efforts to secure proper articulation do not imply the complete elimination of problems of transition. Indeed, the problem of school-college relations which probably impinges most upon each individual freshman is the difference in the *rate* at which material is presented in school and in college. Elementary foreign language study is normally equated as one college semester to one high school year. Trigonometry, which is apt to receive about 90 class hours in high school receive some 30 to 45 in college.

It is precisely this situation which makes my mathematical analogy so apropos, for, mathematically speaking, rate of change and slope are the same thing. We are not proposing, when we talk about articulation, to eliminate discontinuities in slope or in rate; all we are hoping to do is to effect a continuity in the educational experience. There will still be problems of transition from school to college.

LEVELS ON WHICH ARTICULATION SHOULD TAKE PLACE

There are probably three levels on which problems of articulation arise. We may call these (1) the remedial level; (2) the normal level; and (3) the gifted level.

These terms indicate with sufficient clarity what is meant so that definitions may be dispensed with. There will always be some students who, generally speaking, are ready for college, but whose preparation in certain areas of general education is deficient. The college clearly has two options with respect to students of this sort: it may refuse to admit them, or it may take them where they are and give them appropriate work. There is, I suppose, a third option, namely, that of taking the student and giving him inappropriate work, but I do not

believe that anyone would advocate this in theory, although probably more of us are guilty of it in practice than we would like to admit.

In theory, however, most colleges now subscribe to the principle that if they have decided to admit a candidate, the candidate should be given work appropriate to his preparation. This clearly means that in many cases a certain amount of remedial work must be done.

As a matter of fact, it seems to me that colleges have probably paid a good deal more attention to this kind of articulation than to articulation on either of the other two levels. We are accustomed to remedial classes in English and in mathematics, to drill sections in spoken language, and devices of a similar sort. This is an important form of articulation, but actually it does not come to grips with the heart of the problem. Rather, it is an attempt—let us say it frankly—on the part of the colleges to overcome the shortcomings of the schools. And let not the schools be too proud to admit that they do have shortcomings. It is not possible for any school to graduate a group of students who are so homogeneously prepared that they are equally ready for college work in all subjects, with no deficiencies of preparation. This was not the case even in the colleges which formerly insisted on subject matter entrance examinations, for some admitted students barely passed, while others had honor grades.

Again, a good deal of attention has been paid in recent years to the problem of articulation for the abler students: those who are prepared to start at an advanced level, or work more rapidly or effectively, or go faster or further than their normal colleagues. I have purposely used very general terms here, because there is considerable disagreement among those who are primarily interested in promoting this kind of articulation as to whether or not they are dealing with "gifted" pupils. One can, of course, define a "gifted" pupil with almost any degree of rigor that one wishes, limiting the number to a very small fraction indeed of the school population or extending it unduly in the other direction. Let us avoid the controversy. It is clear, in any event, that there are pupils in the school and college population, whether technically "gifted" or not, who are capable either because of their natural abilities or because of superior school training which they have received, of starting at a more advanced level than their fellows, and doing more or better work. Colleges have been dealing with this group too.

Articulation on this level, like articulation on the remedial level, does not seem to me to pose too great a problem for either the schools or the colleges. Clearly some kind of advanced placement program is in order. For the very bright student in a small school

which cannot adequately meet his needs, probably early admission to college is a satisfactory answer, the best solution that can be found. For a similar student in a larger, more favored school which can meet his needs, it is, in my judgment at least, probably better for the student to remain in the secondary school until graduation, taking if possible advanced work in school, and receiving either advanced placement or advanced credit in recognition of this work upon entrance to college. The experiments conducted under the auspices of The Fund for the Advancement of Education, and the newly instituted Advanced Placement Tests of the College Entrance Examination Board are indications of the attention which is being paid to this level of articulation.

There is a good deal of misunderstanding as yet about these programs, but there is every reason to suppose that this misunderstanding will be corrected as time passes and the programs are developed. One of the more obvious difficulties is the failure of many schools to realize that there is a difference in kind as well as in extent between freshman college and senior school courses in the same field. An equally obvious difficulty is the refusal of certain college professors to recognize that any course given by anyone else, in any other college and particularly in school, could possibly be the equivalent of the course given by him. He reluctantly accepts transfer credit from another college, but doesn't see how any school teacher could give a course he could possibly accept. Straining at gnats and swallowing camels, however, is not confined to higher education.

The really serious problem of articulation is to be sure that it will take place on what might be called the normal level; that is to say to see to it that the great middle group of college freshmen are being given a unified and continuous educational program with school and college two self-respecting and mutually respecting agencies in the process, with proper coordination between them. There is considerable evidence to show that this is not the situation, at least to the extent to which it would be desirable.

HOW SHALL WE ACHIEVE ARTICULATION?

I should therefore like to make a few general observations on how better articulation can be achieved in any subject area, in general education, or just between school and college as institutions.

In the first place, there must be cooperative effort. The school cannot take the attitude that it has no responsibility for college preparation, that the college must take the school product as it is regardless of whether it is what the college wants or not, and go on from

there. Neither can the college take the attitude of dictating to the schools what the colleges want without proper attention to the realities of American secondary education in the twentieth century.

As a matter of fact, these attitudes are not really widespread. The schools for the most part are eager to graduate students who will have had the kind of preparation the colleges want, and the colleges do not attempt to dictate to the schools to anywhere near the extent that many schoolmen profess to believe they do. Each institution is eager to cooperate with the other, but often does not know how to do it. Moreover, genuine difficulties exist. Programs such as those being conducted by articulation committees in several states can do much to develop a climate favorable to cooperation.

Let me describe very briefly three aspects of the New Jersey program which are contributing, I believe, to this end.

First, a great deal has been accomplished merely by having a committee which has met about five times a year for the past seven or eight years, a committee on which school and college people sit together as equals and discuss their mutual problems fully and frankly. It is helpful for a college officer to be told by a school principal that the fourth year of English listed on a high school transcript might have consisted of journalism or stagecraft, and that a certification that a student had completed intermediate algebra did not necessarily mean that he had had a course given under that title. It is helpful for a high school principal to be told that the college mathematics department doesn't care what theorems in plane geometry are studied, so long as mathematical power is developed. It is helpful for the high school members of the committee to realize that college deans and admissions officers have faculties to convince before mutually acceptable ideas can be implemented, and for college officers to understand the extent to which the high schools labor under restraints imposed by their state departments and their local school boards, to say nothing of social pressures, particularly in suburbia. Getting together and airing matters of this sort, determining areas of agreement and areas of disagreement, has been more than helpful; it has been stimulating.

A second important aspect of the New Jersey program is the school and college intervisitation program. Here a conscious effort was made by the Committee to stimulate groups of college professors and high school teachers, not deans, admissions officers, principals and guidance officers, but bona fide classroom teachers on both levels to visit institutions on the other level. During the past four years, such visits have literally been numbered in the hundreds in our State.

Moreover, we have asked the schools to see to it that the college visitors had the opportunity of visiting at least one non-college preparatory class, so that they might obtain some understanding of the non-college preparatory functions of the modern senior high school. Evaluation meetings of various sorts have revealed a tremendous growth in understanding resulting from the program of intervisitation.

Third,—and I will merely refer to this—the studies of the Articulation Committee have revealed that most of the New Jersey College catalogs can be greatly improved in content and in style to enhance their usefulness to school guidance officers and prospective students. With the cooperation of the New Jersey Association of Colleges and Universities, the Committee is sponsoring a workshop for college admissions directors and catalog editors or compilers (many college catalogs have no *editors*) to take concrete steps toward accomplishment in this area.

In short, our New Jersey experience has been that both schools and colleges are eager to cooperate, if some committee will serve as the catalyst so that the two groups may react and interact, instead of living in unaffected isolation.

A second general point I would make with respect to the achievement of articulation is to warn the schools of a "booby-trap" into which their very best teachers often fall. This is the temptation to try to anticipate the work of the college, instead of merely doing the school job. Returning freshmen are apt to help in leading the teacher into this temptation. There is plenty for the schools to do without trying to ease their students' college path by teaching items which are not properly part of the secondary school course, but which the teacher believes the pupil will find helpful when he or she gets to college.

I would like to see a situation develop in which the colleges would be so sure of the quality of the work done by the schools in their own field that the colleges would avoid their comparable "booby-trap," of assuming that the student has learned nothing in school, and starting all over again as though he were completely untrained.

A third general observation is this: that the colleges generally are far more interested in the development of power in any subject than they are in the coverage of particular material. It is a never-ceasing source of astonishment how long outmoded educational ideas persist. Approximately fifty years—indeed more than fifty years ago—the colleges had very prescriptive entrance requirements. A student was expected to have read certain books as a part of his English course;

he was expected to have studied certain theorems in geometry; he was expected to have performed certain particular laboratory experiments in physics or chemistry. These notions die hard. Many schools are still under the impression, or act as though they were under the impression, that reading lists, starred propositions, prescribed laboratory experiments are still with us.

Textbook editors tell a similar story; they say that they must continually add new material, but take out nothing, if they wish their books to sell, because some teacher will surely want to have a chapter on some obsolete material for the reason that "the colleges require it."

One wonders whether the schools are using college entrance requirements as a whipping boy, so to speak, to conceal the inability or unwillingness of their teachers to teach creatively. In education as in religion the letter killeth, but the spirit giveth life. It is much easier to supply a fact or two which a college student has failed to learn than it is to repair the failure to develop power to deal with ideas which has come about as the by-product of too much preoccupation with coverage of material.

The fault however is not exclusively that of the schools by any means. Colleges still print entrance requirements which do not reflect actual admissions practice. College presidents, professors and departments issue unwise pronouncements about what the schools should do, and too often these put their faith in coverage of subject matter rather than in the development by a wise teacher of the capabilities of the pupils.

In the work of the New Jersey Committee we have found that genuine agreement as to objectives, materials, and competencies can be attained by bringing together teachers from school and college for frank, unhurried and uninhibited discussion of mutual problems. In English, mathematics and foreign languages this has been done.

We have found further that the place to begin such discussions is not in the area of such large diffuse topics as the objectives of secondary education, or the aims of general education in college. It is important to begin with much more restricted topics, and then branch out into more generalized discussions. Thus, the question of personal adjustment, undoubtedly of great importance, was one with which we were prepared to grapple only after we had talked at length about more specific matters.

Finally, for the light it throws on how schools and colleges can bring about better articulation, I should like to refer to our so-called "duplication study."

DUPLICATION

One of the activities of the New Jersey Committee was a study of the duplication of subject matter between the high school courses and the courses of the freshman year in New Jersey Colleges. We found that a considerable amount of duplication, as seen by the student—which may not be an entirely accurate reflection of the fact—seemed to exist, but there were two more significant facts to which I wish to direct your attention.

And from this I draw the inference that the schools have been paying more attention than the colleges to pupil needs, while the colleges have assumed either that the school course accomplished nothing worth paying attention to, or that it had accomplished a certain "coverage" theoretically pre-determined.

I have tried to do two things in this discussion: to emphasize the need for improved articulation and to suggest ways and means of bringing it about. I have particularly stressed the notion that only a cooperative approach can succeed. In conclusion, may I suggest two presuppositions that in my opinion should underlie any efforts toward improving articulation in general education programs, although I think they are of broader applicability as well. The first is that in the future the admissions process will necessarily and desirably give more attention to proper placement, and the second is like unto it, that school aims and pupil accomplishments should be stated in terms of competencies rather than in terms of subject-matter studied or time spent in the classroom.

Albert E. Meder, Jr., is Dean of Administration, Rutgers University.

BETTER ARTICULATION BETWEEN SECONDARY SCHOOL AND COMMUNITY COLLEGE

Lawrence L. Bethel

The subject of better articulation between secondary school and college has been one of concern, discussion, and concerted action during the past several decades. It formed the basis for the original organization of the regional associations of colleges and secondary schools. It has been a major concern of the Association of Collegiate Registrars, the Association of Secondary School Principals, and many other professional groups. Much progress has been made toward better understanding and better integration of effort. The problems of articulation are now accentuated, however, as we look forward to the increased number of secondary school students and the

rapidly increasing percentage that will be on for full-time studies in higher education. We are told that the community colleges will be expected to provide for most of the increase. This leads to the suggestion that the secondary schools and community colleges have a special obligation of articulation if these students are to be served effectively. Specifically, the problem is two-fold: (1) to develop programs of study appropriate to wide variations in interest, special aptitudes, and needs; and (2) to counsel with individual students for the selection of the most appropriate program and institution.

The speeches we hear and the professional articles we read are filled with alarm over what is to be done with these people. Buildings and faculty in sufficient number are part of the concern, but another phase is of even greater significance, i.e. is it possible that such a high percentage of students really possess the ability to pursue college studies? Some say "certainly not," and that we would be wasting time, and money, and would be fostering frustration in many of these students if we admit them to college. Others suggest that although many are not capable of handling the studies of our senior colleges and universities, they should be provided a different type of post-secondary education which the proponents would label community college studies but with reluctance and with the tongue in the cheek in attaching the word "college" to such quasi-intellectual activity.

There is a third group that rebels at the thought of either of these proposals. The people of this group look with reproach upon the educator who would limit higher education to specially ordained curriculums and instructional methodology that require a particular type of aptitude, intestinal fortitude, and self-discipline on the part of the student in order to survive the educational experience. They point in criticism to the high casualty rate among students pursuing such studies due either to lack of appropriate abilities, lack of interest, or conflict with the methodology used. They make reference to the superior record of students in senior colleges who have transferred from so-called terminal programs in community junior colleges.¹ These students did not pursue the type of curriculum ordinarily required in the first two years of college, yet they excelled in upper division studies in comparison with other students who had followed the historical content and methodology.

They call attention also to the ivy-league college that opened a non-credit program following World War II for the discard G. I.

¹Ells, Walter C. "Success of Transferring Graduates of Junior College Terminal Curricula," *Journal of American Association of Collegiate Registrars*, July, 1943, 18:372-398.

candidates who did not meet the ability requirements of the regular program. Yet after one semester, fifty of these discards had shown such outstanding accomplishment that they were then admitted to the regular degree program. Perhaps they did need this special handling during the first semester, but they did prove ultimately that they were worthy students.

It is not intended that general condemnation is being made of all traditional higher education programs. Their meritorious effectiveness for specific purposes for people of specific abilities are most laudable. It should not be interpreted that anyone is advocating "educational spoon-feeding" or "intellectual baby sitting." Higher education should develop self-discipline and responsible independent action in students. It must be recognized, however, that our historic pattern of higher education fails in these purposes with 50 percent of those students admitted, resulting either in failure or drop-out, and refuses admission to an increasingly large number. Is it not probable, however, that some of these people vary from the usual academic pattern in their interests, their aptitudes, and their needs? Is it not probable also, that these people may be fully as worthy intellectually and in their future creative value to society as those whom we now serve successfully in our more traditional higher education programs?

I wish to make it quite clear that the challenge of these criticisms and suggestions of responsibility are directed to senior colleges, secondary schools, and to my own colleagues in community colleges alike. We all share responsibility for the educational policies and practices of the past and the present. It is natural that we should have all sought to perpetuate that which we felt was the best of our educational heritage. Similarly, we all face the future together. We recognize, together, that our problems of the next few years will be considerably enlarged by a mounting school and college population. Should we attempt to mold this increased number into our present practices, or will the situation have become crucial enough that we will seek to re-examine our policies and practices and perhaps seek adjustments that will improve our services to a greater variety of aptitudes, interests and needs? What kinds of changes or adjustments appear to be most worthy of exploration? I would list three that perhaps are among many:

(1) Improved screening for specific aptitudes and interests. There appears to have been an increased tendency in recent years for schools and colleges to place reliance on general rather than special abilities in students. Two influences have been important in promoting this tendency: (a) the trend toward more breadth in pro-

grams of study in greater recognition of the importance of general education in all phases of life; (b) the postponement of specialized education to a later point in the formal educational experience. These have dictated the content of the early stages of school and college. It follows naturally that when we run correlations on tests and academic achievement we find that those who survive are ones who have the aptitudes for generalized studies. What would happen, however, if we selected for special aptitudes and interests as well, and then related our general studies to these special interests? Such an idea is not new. The Fone School of Dental Hygiene of the Junior College of Connecticut, Bridgeport, and the Fashion Institute of Technology of New York are two of perhaps many specialized community colleges that are following this practice as a means toward greater motivation and meaning. Must our basic foundation in general education be studies in the abstract? Is there any harm in appealing to special aptitudes and interests? One outcome of such practice is worthy of note—the rate of student retention will be as much as fifty percent higher through such a relationship.² Is this worthy of further consideration in our handling of increased numbers and is it applicable to both secondary school and community college?

2. Types of educational programs. The practice of screening for general aptitude to discover those who are capable of going on to college, has caused us to "type" our programs of instruction. The college-bound student may be given a basic program of general studies in preparation for further study, while those of various specialized abilities are grouped with those of little ability and given a dead-end or so-called terminal program. I say "so-called" because the facts show that for large numbers the program is not terminal, i.e. most terminal students go on at some time for additional formal studies either on a full-time or part-time basis. Community colleges and urban universities enroll such part-time students by the thousands. Often they must do so with serious handicap to the student and to the institution. An employed man may find he needs technical courses such as tool design or electrical circuits, yet in his previous full-time studies he has had only shop mathematics or business arithmetic. He must now re-do his preparation in mathematics. It is probable also that he is short in his study of physics and other basic subjects.

² Eighty-six percent of the Fashion Institute of Technology freshman class of 1952-1953 received their degrees in 1954. The graduating class of 1955 represented 76% of the entering group. This compares to the usual 35%-50% in most institutions.

It is equally tragic for a boy or girl to find at the conclusion of a dead-end program that he could, by his special aptitudes, go on for further full-time study except that he is lacking in basic preparation. Dr. Harold P. Rodes reports from a California survey of community college students that the greatest deterrent to students registering in terminal programs is their fear that they might later wish to go on with further study and be denied the opportunity because of inadequate preparation. At the same time it was revealed through a study of students who graduated from pre-engineering programs that "80 to 90% of the students originally enrolled will fail, for one reason or another, to achieve the transfer objective of preengineering curriculum. Moreover, aside from the small amount of drafting or surveying included in the preengineering program, these students will have very little in the way of any saleable skill or understanding with which to obtain placement in their field of major occupational interest."³ It is probable that these people chose the program of study, which for them was unrealistic, rather than make a long-term decision regarding the probabilities of further study.

It would appear, therefore, that such extreme "typing" of preparatory versus terminal programs does an injustice to the majority of students of all programs. Two conferences of representatives of community college faculties and administrators of the east and west coasts were held simultaneously early in 1949 for the discussion of this problem, with specific reference to technical curriculums. A joint meeting of representatives of the two groups followed. It was interesting to note that although the groups had met independently, their conclusions and recommendations, except for one small and temporary disagreement in terminology, were identical. They concluded that the basic program for technical education in the community college should be one program and not two, and from which graduates might go on for more advanced technical education or enter gainful employment. This recommendation coincides with a statement by William L. DeBaufre, chairman of the Department of Engineering Education, University of Nebraska, regarding engineering curriculums in senior colleges in which he called upon "—engineering colleges to—organize curricula so that each year in college will prepare students for more responsible positions in industry as well as for more advanced engineering studies."⁴

³ Rodes, H. P. "Technical Training in the Junior College," *California Journal of Secondary Education*, 1949, 24 (1): 26-27.

⁴ DeBaufre, William L., "Technological Education in a Democracy," *The Journal of Engineering Education*, October, 1946, 37 (2): 154.

The basic concept expressed by these individuals and groups is that formal and informal education should be considered a continuous process and all toward the same basic objectives which are concerned with the development of the individual student. Furthermore, it is considered to be inappropriate to attempt the pre-determination of the terminal point for formal education for a given student. It is much more appropriate to assume that every student may return to the classroom for more advanced studies at various times (full-time or part-time) throughout life and that meaningful basic studies are essential to this continuation of his growth.⁵

The very practical question then arises, "how can we expect to present higher mathematics, physics, economics, and literature so that these subjects can be comprehended by those who do not possess high general scholastic aptitude"? This is one of the foremost challenges to the professional educator. It was the challenge faced by H. Glenn Ayre when he wrote his text-book in Basic Mathematical Analysis intended for all college freshmen regardless of the field of major study and with which he won the McGraw-Hill Book Company community college prize in 1950. It is the challenge faced by the armed forces in up-grading men for commissions. It is the challenge faced by a psychology instructor from a California community who came to a workshop in Denver with the problem, "what can I do with the lower 4% section in psychology? I know what to do with the upper groups—I follow the university syllabus." After three weeks of help from the work-shop group this instructor had reversed his position. "Now," she said, "I'm worried about my upper divisions." The generalization can be made that when we find means of coming within the comprehension of the less gifted, we make a contribution also toward the improvement of instruction of the gifted.

3. Changing Social and Economic Demands. The third type of adjustment toward the improvement of our services to the aptitudes, interests, and needs of students may come through our study of the changing social and economic demands of our times. In 1953 ten business executives of Denver, Colorado, and ten community college administrators met in a three-week full-time work-shop at the University of Denver. This group sought to evaluate the appropriateness of Community College programs and to develop suggestions for greater effectiveness in these programs through the

⁵ See Bogue, Jesse P., "The Community College," McGraw-Hill Book Company, Inc., 1950, pp. 196-204 for a more complete presentation of this point of view.

analysis of a sampling of selected occupations and professions. The report issued at the close of the work-shop listed seven fundamental weaknesses in most community colleges. The first of these is particularly illustrative of the necessity for continuous exploration of the actual requirement of economic activity:

"The technical aspects of college programs are given emphasis over the personal development aspects, yet the primary requirements in all positions (studied by this group) fall within the classification of *Personal Development*.

"This criticism applies to the content of individual courses as well as to complete programs. Personal development is here meant to include appreciations, resources, facility in the orderly approach to the solution of problems, orderly work habits, etc. Many courses appear to become an end within themselves rather than a means to an end—the development of the individual. In many instances, the redirection of present courses will accomplish the desired objectives without the substitution of new courses.

"Colleges appear to depend upon *incidental learning* for the accomplishment of personal development. It is doubtful that extra-class activities are adequate for accomplishing these objectives in consideration of the strong emphasis that business places on personal development."

"———It is natural to expect that educators would be interested primarily in the broad development of students. It is probable that the over-emphasis on the technical phases of specialization has resulted from misinformation or misinterpretation of the technical demands of positions. This information should be checked with local business and industry and objectives reviewed in terms of findings."⁶

There are many reasons why the community college is being designated as the institution that must provide for most of the anticipated increased collegiate registration. The most important reason may be that it is the kind of college that by its philosophy, size, and structure, is in the best position to work with a wide variety of capable students. It is small in comparison with our great universities. Smallness is a virtue in this case, because it facilitates individualized counseling and promotes small group instruction. The community college, again by its basic philosophy, is staffed by pro-

⁶ Report of the Community College Workshop, University of Denver, July, 1953, Lawrence L. Bethel, Director. Copies may be procured by addressing Alfred C. Nelson, Dean of the Community College, University of Denver, Denver, Colorado.

fessional instructors whose primary objective is the development of the student as an individual. It is an institution that in many instances believes that preparation for a productive life and preparation for further study can progress simultaneously in one program.

The community college has many of the special attributes required by the new demands of collegiate education of the next fifteen years. The fact that it holds many of these in common with the secondary school, should serve to enhance the opportunity for improved articulation.

SUMMARY

The problems of articulation between secondary schools and community colleges are fundamentally the same as they have been during the past twenty years except that they are accentuated by the great increased number of students, and with greater variation in interests, aptitudes, and needs, seeking to continue their education in the community college. Shall we draw an arbitrary line to exclude those applicants who do not possess the kinds of general scholastic abilities and interests that we have found are necessary to success in the usual collegiate programs, or shall we attempt to explore possible adjustments and adaptations in our policies and practices that will enable us to serve better this wide variety. Three possible adjustments are suggested for exploration: (1) improved screening for specific aptitudes and interests in addition to consideration of general aptitudes; (2) reconsideration of types of instructional programs and their content to include sufficient basic preparation essential to the continuation of education for all; (3) re-examination of changing social and economic demands for their influences on the needs of students.

These are problems which call for the cooperative effort of the faculties and of administrators of secondary schools and community colleges. We are all part of a continuing program for the maximum development of the individual student. Our purposes basically are the same. It may be that as our problems become intensified, we may through our combined efforts be able to attain a new level of educational effectiveness for all students.

Lawrence L. Bethel is President of Fashion Institute of Technology, under the program of the State University of New York.

BETTER COUNSELING AND SELECTION FOR COLLEGE

Walter H. Wolff

I conceive it to be my duty to set the stage upon which the experts on this panel and the members of the audience may play their parts. To do so, I propose to present, in summary, some of the basic facts upon which our thinking must be based, and I propose, further, to state some of the problems to which we must address ourselves.

The most immediate and striking fact is that we are on the verge of a prodigious increase in the numbers of students applying for admission to colleges. The estimates vary, but the lowest of them makes it plain that within a few years (1960 is often set as the date) the number of suitable candidates will be far greater than the capacities of the colleges of this country.

We may confidently expect that the distribution of intellectual abilities in our school population will not change to more than a slight degree. If so, we will have an absolute rise in the numbers of boys and girls who are fully capable of profiting from a college education and whose usefulness to society will be markedly increased if they attend a college. This absolute increase in numbers will occur not only at the level of the extremely gifted, but at other levels as well, in the numbers of markedly able students and of competent students. There is reason to think that some of our private colleges will refuse to increase the sizes of their incoming freshman classes. Other institutions will permit an increase to occur, but it will not be in proportion to the rise in college bound population. Unless far-reaching and very expensive programs of expansion in the public colleges are initiated, our institutions of higher education will not be able to accommodate the hordes of candidates who will apply for admission. If the facilities for higher education are not expanded, our colleges will perforce be more selective in their admissions. They may take care of the very top of our intellectual pyramid, but there will be shameful neglect of the many thousands of able young men and young women who can become more useful members of society if they receive a sound college education.

In extenuation of the colleges, it may be said, in passing, that they are struggling with two insuperable problems of their own. The first is the lack of funds, without which the thought of expansion is a pipe dream. The second is far more serious. It may be put this way: our fifteen-year olds who are now in the secondary schools were born in 1940. Our twenty-five-year olds, whose services

as teachers can be sought, were born in 1930. The difference in birthrate between these two dates is such that it is probable that there cannot be enough teachers available from the twenty-five-year-old group to take care of the enormous number of fifteen-year olds who crowd our high schools. This problem is about to become a college problem, as difficult of solution there as it is in the high schools.

The high school college adviser thus finds himself confronted not only by the customary difficulties which have bedeviled him, some of which I shall discuss, but by new problems. I present some of them seriatim.

As pressure for college admissions increases, the college adviser in the secondary school will not only find that his task has grown too great for the time and energy he can expend; he will find that guidance has become more delicate and more subtle and thus more time consuming, as he is forced to explain to the able children of eager parents that the colleges which might once have admitted them will no longer do so, and that family expectations must be changed. I suppose that this situation will benefit many colleges which have sought to raise standards in their institutions and to acquire for themselves some of the good repute which has settled on the well-known institutions. One of the duties of college advisers in the high schools, then, must be to seek out and evaluate with some accuracy the many small and less known institutions where a sound Liberal Arts education may be obtained. This presupposes detailed knowledge of colleges in this country, the achievement of which will constitute a burdensome goal for college advisers.

The task of persuading parents to permit their children to go farther away from home than they had ever anticipated will be another problem the college adviser must meet.

The sheer mechanics of college counseling will become an overwhelming burden. From the task of preparing transcripts through the task of preparing a fairly accurate description of the candidate for the College Admissions Committee to the time consuming interview with candidate and parent, the college adviser will be engaged in a losing race with time. It will take the cooperative efforts of many persons in a high school to meet deadlines and to satisfy their professional consciences.

It is the duty of a school system such as New York City's, in which the pressure for college admissions is tremendous, to provide far more adequately than it has in the past for college and scholar-

ship advisers' services in its high schools. If it does not do so, its high school graduates will fall far behind in the race for college admissions, a race which has already begun.

Perhaps the gravest weakness in secondary school college counseling and one of the great problems to be faced is a failure in communication. In large schools the college adviser knows too little about the pupils whom he is counseling. In most schools, whether large or small, it is probable that too few pupils know early enough in their careers of the possibilities which lie ahead. How is one to reach into the home to persuade parents that their able children should set their educational sights high? No one of us knows how many able girls are lost to teaching because it is the family expectation that they will be stenographers and secretaries. Communication is basic to good guidance. We need inventive geniuses who will teach us how to do it better.

Our weakness in communication exists just as dangerously between school and college and college and school, as it does within the school itself. Take so seemingly simple a matter as the statement by a college of its admission requirements. When the catalog specifies one and one-half years of algebra and one year of plane geometry, the college has taken refuge in traditional courses and Carnegie units, and to that extent has tied the hands of the high school. When in more enlightened vein colleges speak of "sound preparation in mathematics," they have still neglected to state clearly what is wanted. Why not, "The candidate is expected to present such experience with, and skill in mathematics as will enable him, successfully, to take a freshman course in mathematical analysis of the standard set in such and such a textbook"? This is an operational definition. Such definitions have been used in the area of the communication skills. College catalogs are much quicker to ask for the ability to write acceptable English prose or the ability to read and speak a foreign language with fair fluency. Perhaps when all the requirements are set down in terms of the demands made upon the student in a freshman year, the high school guidance counselor will be better able to appraise the student-candidates for whom he must prepare recommendations.

This obligation to communicate in understandable terms is no less great for the high school. College admissions officers must be bored to tears with the customary clichés that appear on application blanks. Somehow schools must find a way to describe themselves accurately, as the backdrop against which the portrait of the student is to be painted and then find ways of talking specifically about the

abilities, the knowledges, the skills and the personalities of the candidates who are presenting themselves for admission. The rating scales customarily used now have helped a great deal, because they have reduced to a quick checking what might otherwise have been a difficult task in prose composition. But it is the duty of the school, nevertheless, to attempt somehow to transmit a view, however dim, of the unique characteristics of each of the young persons for whom a form is filled out.

One of the most ticklish problems that is faced by college advisers in New York City is the difficulty of persuading parents that it is better for their children to attend a good college a thousand or even two thousand miles away than to attend one less suitable within easy driving range. If we were to prepare a map showing by little dots of ink the colleges to which New York City high school graduates went, the northeastern area would be solid black. It is a common New York City attitude that the University of Michigan or the University of Wisconsin are in the Far West.

Better counseling may impose upon every school the necessity of making far greater use of suitable standardized tests than is now common. The High School Division of the New York City School System has announced its intention of seeking budgetary funds to provide the Iowa Testing Service for incoming students. Such a step would prove a boon to the harried college adviser, as well as to all other guidance personnel.

Bedeavouring both school and college is the multiple application problem. To protect himself, the applicant applies to several colleges, each of which must process the application. The College Entrance Examination Board is attentive to the problem and is seeking ways to make excessive multiple applications unnecessary.

If we are to provide better counseling of students and better selection of college for each college-bound pupil we shall need larger budgetary allocations of funds, more teacher time, more satisfactory avenues of communication and greater opportunities to go out into the community so that we can alter educational expectations for the better.

Our discussion of the problems of better counseling and selection for college need not be confined to those which I have indicated. Our resource panel and the audience will, I am confident, bring to our attention the other problems which exist and some of the kinds of tentative solutions which have been employed.

Walter H. Wolff is Principal of William Cullen Bryant High School, Long Island City.

CO-OPERATION OF SECONDARY SCHOOL AND COLLEGES IN ACCELERATION OF GIFTED STUDENTS

Morris Meister

A dictionary definition of the term *articulation* is, an act of joining; a junction point. Applied narrowly to the theme of our conference, this definition calls attention to the point where high school stops for most students and college begins for about twenty percent of them. Since only one in five can or wants to make the connection all we need is a good sieve, that is, an effective college admission procedure.

Until recently, this has been the somewhat over-simplified view of the problem of high school college articulation. The point of view has worked fairly well so long as high school population was decreasing and college population remained fairly stable. High schools have been so busy devising ways of caring for the needs of the large numbers who will never go to college that they haven't worried much about the different kinds of barriers erected by colleges, in the exercise of their sovereign right to control admissions. At the same time, the colleges have been complaining, in a mounting chorus, about the quality of preparation for college work among those they do accept for admission. Some of the complaint is justified.

But the population picture is changing rapidly. The children are now born, and in the lower schools who, in a few years, will be crowding the high schools to the point of explosion. Increasing popularity of the college degree in American culture is already affecting college enrollments, and on top of this the colleges must get ready to receive the explosive pressure of high school graduates in the near future.

Most important, the critical shortage of trained manpower in all fields and especially in secondary and college teaching threatens to erode still further the quality of learning at both levels of our educational system. Thus, the problem of articulation becomes serious in a new dimension. What we seek is a good junction point in a *living* organism. We know that a living joint functions properly not when mere friction is eliminated, but when muscle tone, blood supply and healthy nerve action are also present.

This view of articulation demands a re-appraisal, for which the writer offers a number of suggestions and considerations, as follows:

First, *we must conceive of cooperation between school and college as a two-way process.* There must be some "give" on both sides.

About four years ago, when the Fund for the Advancement of

Education announced what is now referred to as the Early Admission to College program, the National Association of Secondary School Principals reacted rather sharply. In a statement addressed to its 12,000 members, dated May 4, 1951, these were the recommendations:

1. That we oppose the acceptance of any plan which will result in the curtailment of secondary education for youth even though it may be on a limited scale. That we advise with students, teachers, counselors, and parents of our schools and school communities accordingly.

2. That we recommend for college only youth who have completed the requirements for graduation in keeping with the policies of our regional accrediting agencies. On the basis of this policy that we recommend for college only youth who have completed the twelfth grade.

3. That we award secondary-school diplomas or equivalency certificates only to students who meet the required and established standards for graduation from the secondary schools.

4. That we use every means at our command to present to all the educational, community, and other meetings the implications of the unsound practice of curtailing secondary education and the subsequent admission of students to college before graduation. That we point out as effectively and as forcibly as possible these dangers, even with the alluring inducement of funds provided by the Ford Foundation. We must make citizens generally aware of the sinister implications of such a program especially if a scholarship award is offered to their sons.

5. That you as a principal or superintendent write NOW to the Director of Admissions of one or more of the four universities, stating your position on general policy of curtailment of secondary education. Address the institutions in this "experiment" with which you have closest relations.

Nevertheless, thousands of students accepted these scholarships. Judging by their experiences in twelve different colleges no serious educational tragedies have resulted. On the contrary, these early-admitted students have fared better than expected, in every way. In our own school we have been following the experiences of about 50 or 60 of them who were yanked out before receiving a diploma. More than half of them have answered questionnaires to which they were not required to sign their names. All who answered said they feel their decision to accept the scholarship was a wise one, that

they were doing well scholastically, that they have adjusted well socially and that they have encountered no unusual difficulties. Two negative replies are interesting. One said, "Yes, it is possible my social adjustment would have been better had I waited another year or two." Another said, "There is some social stigma to being a Ford student, but discretion will subdue it and prevarication remove it."

Of course, opposition to early college admission came just as sharply from the colleges. Despite the good results referred to above, most colleges remain unreconciled to the idea; as are indeed most of the high schools. What is a bit unexplainable is the fact that several colleges while steadfastly refusing to admit any Freshman younger than seventeen will accept Ford scholarship money for a substantial number of sixteen-year-olds each year on the early admission plan. True cooperation, then, between schools and colleges will require less absolutism, more willingness to abandon sovereign rights and greater attention to the facts of life in schools and in colleges.

Secondly, *we must sharpen our understanding of the term, acceleration, especially in its relationship to enrichment.* There is such a thing as *raw acceleration*. For example, skipping a grade in the lower school or ejecting a tenth or eleventh grader from high school into college, might be considered raw acceleration. This, however, is not the same as what is sometimes called *enriched acceleration*.

Traditionally, "acceleration" describes a school procedure which permits students to obtain a given amount of education in less than the normal amount of time. "Enrichment" refers to a procedure which gives students more education in the same time. In practice, however, these definitions are not as simple as the statements indicate. When dealing with real children, in actual classrooms of specific schools, manned and administered by available teachers and principals, the concepts of acceleration and enrichment become complicated and intertwined. The child who can accelerate gets many enrichments in the process. Also, he may or may not be losing in other ways, not readily measurable. Even assuming that there *are* some losses, the latter are usually determined by whether he deviates markedly from the norm of his group. In a large company of accelerants, he may not be subject to social or emotional imbalance. Should enrichments rather than acceleration be provided for him, his individualized demands quickly outstrip the possibilities of the teacher's available time, energy, facilities, resources, and

training. As a result, only a modicum of enrichment can ever be offered and the needs in some areas for *all* individuals are often neglected.

Acceleration and enrichment cannot be treated as a dichotomy. It is not a question of either or; but of how much of each. Each has its values and each its evils. There is as much danger of social and emotional imbalance from retardation as from acceleration. The question, as Terman puts it, is "How much risk of maladjustment can one afford to take in order to keep the gifted child at school tasks difficult enough to command his attention and respect? . . . No universal rule can be laid down governing the amount of acceleration that is desirable."

The fact is that enriched acceleration does take place. Every teacher of an honors class will testify to that and support his conviction with data derived from many kinds of educational yardsticks. A class of high-ability youth learns faster and more deeply; they grasp concepts more quickly and retain them longer; they apply knowledge more readily and think more creatively. The duration in time of schooling is hardly as important as the quality of the learning and the degree to which all individuals approach their capacity potential.

Thirdly, *we need more facts and more studies in the area of both raw and enriched acceleration.* We will know when to take calculated risks in the education of children when we know more about the nature of intellectual and social growth in individuals of different ability levels. Can we identify at the eighth-grade level the kind of child who can do the four-year high school course in three years or two? And what, if anything, does he lose in the process? By what techniques may this loss be minimized? What kind of individual can be safely accelerated and/or enriched, to what extent, and how?

The evidence on accelerated students assembled by Dr. Sidney L. Pressey of Ohio State University and by Dr. D. A. Worcester of the University of Nebraska* are most impressive, in this connection. While not a complete endorsement of raw acceleration, this evidence points decidedly to numerous advantages for -enriched acceleration.

*S. L. Pressey, Science, September 6, 1946, *Acceleration: Disgrace or Challenge?* S. L. Pressey, *Time*, *The American Psychologist*, August, 1946 *Saving In Professional Training*. D. A. Worcester, *The Education of Children of Above-Average Mentality*, published by University of Nebraska, Lincoln, 1955.

Fourthly, *enriched acceleration is an essential need for high-ability youth.*

Difference in ability among students must be accepted as a fact of life. Schools must become more aware of these differences and exert more effort to identify them. The great American ideal of education for *all* the children must be reappraised in terms of the differences in native ability which exist. We must not confuse equality of educational opportunity with identity of educational exposure. It is the essence of democracy to give each individual the opportunity to develop his capacities to their maximum potential.

Whenever these basic premises are posited, a welter of discussion follows. What do we mean by "high ability"? High ability of what kind? Giftedness of what sort? What kind of talent and what do we mean by talent? Is high intellectual ability the only kind the world wants and seeks? Is success in school synonymous with success in society? What about social leadership? What about talent in art, music and mechanical ability? What about emotional stability and creativeness? There are no ready answers to these questions because the facts are few or non-existent. In the meantime, schools and colleges must carry on with what they have; they must do the best they can. A major fraction of the time that faculties and students devote to school pursuits is devoted to learnings and the attitudes and character traits called for by these learnings. What we encounter most of all in these activities are individuals who learn more or less rapidly.

Until we know more about gifts and talents, let us do what we can for our *rapid learners*. We can not do less and we can do far worse. There is some evidence, too, that a substantially high, though not a perfect correlation, exists between rapid learning and many of the other talents that society values. The probabilities are high that most of our leaders will come from the rapid learners. We will, in this process, find, stimulate and develop more leaders of all kinds than we will lose. If the rare genius "will out" anyway, then why be concerned? An educational program geared to the near-genius will certainly contribute to the conservation of human talent and reduce its waste.

It is from considerations of this kind that our school and several others gladly entered the demonstration sponsored by the Fund for the Advancement of Education known as the School and College Study of Admission with Advanced Standing. We introduced six of the eleven courses: English literature and composition, biology, chemistry, physics and mathematics. There are about twenty

ty to twenty-five students in each class. Some students are taking four of the courses; some are taking three; most are taking two of the courses; a few are taking only one course.

When we announced the plan two years ago, 250 students and their parents came to an evening conference to find out about it. At that time there was no assurance that any of the colleges would grant the credit. We told the students and parents how uncertain we were about our ability to teach college-type courses and that lots of hard work was in store for every student registered. Nevertheless, more than 100 students volunteered. Their over-all records were carefully scrutinized; also their past performance in the courses they wished to pursue. Not all were accepted. The finally screened group of about sixty were among the best, but not *the* best, in the school. Their ability-level would place them in the top two per cent of the generality of high-school population.

There were, of course, many administrative and programming problems. Among these, three are worthy of mention.

1. *Selecting the Teacher.* The teachers did not rush to volunteer. A Ph.D. in chemistry on our staff steered clear of the job. Fortunately, at least one courageous teacher came forward in each of the six fields. While each of them is a well-qualified, well-trained, experienced person, they are, nevertheless, typical of high-school teachers in New York City.

2. *Teaching Load.* It was felt these teachers should not be required to carry the the full high-school teacher's program of five classes each day. Instead, we assigned to each of them three high-school classes and one college-type class. This made necessary an additional teaching position which costs the city an extra \$7,000 a year. As one can imagine, this was not a simple thing to accomplish; but our Board of Education is interested in high-ability youth. After two years of operation, we are convinced that one fewer class per day is really not adequate. Should future educational budgets remove from our staff the extra teaching position we now enjoy, we would certainly drop the college-type courses.

3. *Teaching Equipment.* The problem in the sciences is especially acute and could not have been solved, were it not for a Ford grant of \$4,000 for the purchase of laboratory apparatus and materials we did not possess. It was not possible to use the funds normally allotted to the school for equipment, since that would have been too great a drain on the high-school courses. The textbooks and a few other instructional materials required in the college-type courses were purchased by the students.

In May, 1954, the same tests in eleven subjects were administered to thousands of high school seniors and college freshmen. The achievements of the high school taught seniors compared most favorably with college taught freshmen.

In May 1955, the College Entrance Examination Board administered advanced placement tests to several hundred high school seniors in twelve subject areas. 1240 papers were written in the six subjects in which our school was interested. The results indicate, in general, that the high school students achieved in superior fashion in all of the areas.

How has the work been going? To begin with, our school has never encountered such enthusiasm on the part of teachers, students, and parents. We are a bit worried about this. We are trying to curb the over-zealous. We are insisting on a reasonable program of extra-curricular activities for all. In a few cases we have had to call in every guidance influence in order to insure a well-balanced program of daily activity. We try never to forget that these boys and girls are young adolescents. In the main, the response has been satisfactory.

Now that the Ford Foundation has removed its financial support, we are charging each student an instructional materials fee of ten dollars each. Finally, *all high schools can not and all colleges will not cooperate in accelerating the rapid learner.*

Before a high school can consider a special program for the rapid learners, it must have identified and segregated enough of them for administrative purposes. Not only is this not done generally, but it is often avoided as an undesirable practice. In the sparsely populated areas of the country, the high school population rarely exceeds 150. It is futile to talk of high school college cooperation on behalf of high-ability students in a school which presents every teacher with the entire spectrum of abilities in every class. In such situations, the writer can see but a few ways out:

1. Raw acceleration
2. Correspondence courses
3. District-wide consultants and special services
4. Individualized instruction on the part of a master teacher (the kind the small school can rarely afford)

Cooperation of high school and college on behalf of rapid learners is highly feasible when sufficient numbers of them are identified and grouped. Here, three school devices have been used with good effect:

1. Honors groups, such as are found in the schools of New

York City, the Major Work groups in Cleveland and the seminar classes in Portland, Oregon and elsewhere.

2. School within a School.* "This concept posits a group of rapid learners of superior general ability as distinguished from those who may excel in a particular subject area. It assumes that a pupil of high intelligence may be expected to do well in many areas. It functions on the principle that the Honor School with its separate organization, adviser, and special guidance services can do a better job in providing a full and rich program for the bright youngster. Also it can direct its attention more effectively toward the pupil who is not working up to his capacity. All this can be done without depriving young people of the opportunity to work and play with children of their own age of lesser ability."

3. The Specialized Schools. There are four specialized high schools for the gifted in New York City. They are Brooklyn Technical High School, the High School of Music and Art, the Bronx High School of Science, and Stuyvesant High School. Each of these schools has a philosophy, an organization, a curriculum and equipment centering around a specific purpose and each is designed to meet special needs, interests, abilities and aims. Hunter High School does not have a special "purpose" in this sense, but, in common with the others, it admits students as a result of a highly competitive examination, so that its student body is composed of moderately and exceptionally gifted children.*

As for the colleges, there are many who frown upon any kind of acceleration. We still hear remarks from certain college professors that they would rather that high schools taught no physics or chemistry at all; so that they would not need to undo the poor teaching in high schools. There are also some colleges whose curriculum organization, especially in the Freshman year, makes impossible any consideration of advanced placement.

While the number of high schools and colleges, where genuine cooperation in the best interests of the rapid learner is still very large, the number of institutions where cooperation is feasible is larger. This is the great hope for those of us who are concerned with bridging the gap between high school and college. Unless the gap is bridged, our nation will continue to suffer from deterioration in the quality of education and from the waste of potential leadership.

Morris Meister is Principal, Bronx High School of Science, New York.

*From a forthcoming report on "The Rapid Learner in Our High Schools" by Leo Weitz and others for the High School Principals Association of New York City.

BETTER ARTICULATION FOR GENERAL EDUCATION PROGRAMS

Theodore D. Rice

Before we directly consider the topic assigned, it may be wise to attempt to assess the setting in which the problem is couched. There is the fact and problem of our technology. This has been dramatically stated by Mr. Wilbur McFeely of the Riegel Paper Corporation and Riegel Textile Company at the Northern Regional New Jersey White House Conference on Education:¹

If we were to compress the known history of man's technological progress into a span of one year, what would we find? One year ago today, we began to shape and use stone implements. We continued in this fashion, without appreciable change for 358 days. Then, just a week ago, still using stone implements we began our long experiment in communal living. We began to domesticate animals and to make pottery. That was last Saturday. Late last Tuesday, we learned how to fashion certain soft metals and thus entered the copper-bronze age. Early yesterday morning, we learned how to use iron. Although this discovery brought great advances, manpower was still the chief source of industrial energy. The so-called industrial revolution which ushered in the mechanical age, beginning about the middle of the eighteenth century, started only an hour and a half ago. The electronic age began less than ten minutes ago.

In short, the rate of acceleration of technological progress, which ran almost flat across 98 per cent of the graph of recorded history, has recently begun to rise. Comparatively speaking, it is rising almost vertically. Thus, from the standpoint of technological progress, *accelerated change is the most characteristic factor in our environment.*

We can well be impressed with the accelerated change that is here portrayed, and, of course, we are struck with the implications of this fact of change for general education. We must realize that while this depicts an "expanding world" in many ways, yet at the same time, the very factors which produce this expansion also produce limitations. (Just try to ignore the "alternate feed" when entering the Lincoln Tunnel at rush hour, for example.) This social limitation is especially true in the experiences of young people. Elements of interdependence throw us into increasingly close social relationships. Yet youth has little opportunity to serve an apprenticeship in his family home for assuming the responsibilities of his own home as he becomes adult. The youth of today have little or no contact with the world of work. Specialization and rapid travel have removed jobs from the communities in which people are living, and

¹ Conference report, "Education-Everybody's Business." New Jersey Whitehouse Conference on Education, Northern Region, March 25 and 26, 1955. p. 9.

little opportunity is made for young people to bridge this gap. With reference to value patterns, the accelerated change indicated above brings a wider range of choices of action which youth must select. Not only is this true, but the period of value reorganization has extended downward to younger people. It is no wonder that in this period we find Riesman coming out with a theory that people are getting their values from what others do in the sense of "other direction."

There are also the population explosion and the rising tide of expectation that all be educated. In high schools we had only 3.8% of the 14-17 year age group in 1890, while in 1952, there were 74.9% of this age group enrolled. It is anticipated that in only four short years ahead, (by 1960), a ratio of 82 to 1 of the age group will be in high school and enrollment now at about eight and a half million will be at eleven million. The responsibility for provision of college education opportunities also looms larger yearly. In a recent article² President Pusey of Harvard University states the situation this way:

Now many Americans are beginning to wonder if the movement to extend the period of formal education for "all American youth" is to be pushed further to include the college experience. It is clear we have already taken substantial steps in this direction. In 1900 less than 5 per cent of those of college age went to college; their numbers were only 230,000. By 1930 there were about one million students enrolled in colleges. Today there are 2,500,000 in college and this is expected to double within the next fifteen years. It is very possible that before the end of the century one out of every two Americans will insist on "going to college."

The foregoing remarks help us gain a little insight as to the present and increasing urgency with which we must take a careful look at what we are doing about general education. In this portion of our conference we are concerned with the better articulation of general education between high school and college. To begin with we might well ask if general education is the "lost curriculum." This is not because there isn't some agreement as to what is meant by general education. Definitions are strikingly similar. For example, the Harvard report says:³

The term, general education, is used to indicate that part of a student's whole education which looks first of all to his life as a responsible human being and citizen.

² Pusey, Nathan M., "The Exploding World of Education," *Fortune Magazine*, p. 97, September, 1955.

³ *General Education in a Free Society*, Harvard University Press, 1945. p. 51.

Quillen and Hanna define it as follows:⁴

General education is the term used to indicate those experiences which are provided to meet the personal-social needs which are common to all or most of the young people growing up in a democratic society.

On the other hand, when we look at the disparities in practice within and between high schools and within and between colleges, some doubt is raised as to the clarity with which purposes are seen, and we tend to reach for some sort of articulation. This could be achieved on several levels. One effort to bring about articulation might be a quantitative one; namely, the specifications of requirements for college admission. In connection with this course of action, there has in the past few years been a shift away from specific high school requirements and toward assessment of a general level of achievement. Qualitative and responsible articulation could not be achieved through a return to the specific requirements. The following are some proposals with relation to a more functional articulation. They are proposed on the assumption that high school and college persons can work together on a peer basis. This itself may be unrealistic, but we see articulation as a *mutual* problem. It is not successful if it is paternalistic.

1. Let's develop qualitative data about students in the high school and then get such data beyond the admissions office of the college and into the hands of college advisors. I refer here to some of the very excellent things existing in some high schools; namely, a comprehensive cumulative record; qualitative analyses of student abilities and growth, such as the progress report of the University of Chicago Laboratory School; the cooperative evaluations developed in some of the more advanced core programs, such as the New School at Evanston, or Denby High School in Detroit. Here the appeal is to move toward something which is descriptive and yet objective, and calls for an evaluation other than the number of minutes and years in courses which is the basis of the Carnegie unit.

2. Let's search out the means of putting responsible counselors in contact with each other. In many high schools, there is developing a pattern in which some teacher in cooperation with the guidance office has a continuous contact with students in teaching and counseling relationships over a two to four year period. In colleges, likewise, there is an effort to link a given group of students to some counselor for a reasonable period of time. It is not enough

⁴ Quillen, James, and Hanna, Paul, *Education for Social Competence*, Scott Foresman, 1948, p. 96.

for the field representative of the college to be the only contact which students may have prior to admission in the college. It is not enough for the guidance officer of the school to be in contact with the college, its admission and counseling policies. At some point the counselor in the college should have contact with the counselor in the high school who knows the student well.

3. Let's seek out a continuity in learning relationships. In the Fund for Advancement of Education Report, "Bringing the Gap Between School and College," waste in this area is pointed out as consisting of needless repetition, of insufficient pursuit of study in a discipline, and of overemphasis on unimportant aspects of the subject. The well known whipping boy in connection with this is the repetition of beginning science in college. An illustration of inadequate pursuit of an area of study is that of dropping a language before it has become useful to the student. Finally, the teaching methods both in high school and college assume that by teaching details of content, mastery of the discipline involved will come. The tragedy of this is that the whole is greater than the sum of its parts, and that retention of a series of factual items does not automatically bring about perspective. In this connection I quote from a specialist in the field of history:⁵

To know a few facts about lines and angles and triangles is not to know plane geometry; the essential thing is to grasp the orderly process by which a group of postulates can be made to reveal their implications in theorems of increasing complexity. To know a few episodes in the past is not to know history; the essential thing is to comprehend the forces that are at work through a long sequence of events, and to incorporate the perspective of time into one's day-to-day judgments. Instruction need not always follow a strictly logical or chronological order. But to leave a subject without having understood the order inherent in it, is to leave it without seizing hold of the most significant and the most useful of its characteristics.

4. Let's stop crossing ourselves up. We cross ourselves up by confusing means and ends. We ourselves lose perspective by teaching some aspect of the humanities, testing achievement in it, and reporting on what the student has done. We come up without any picture of what the student is able to do. For example, one of our purposes is to teach students *to read—to be readers*. We turn out students who *have read Silas Marner*. This is not necessarily the same thing. To clear up this confusion, it is necessary to arrive at a cooperative effort between high school and college to develop means

⁵ Bestor, Arthur, *Educational Wastelands*, University of Illinois Press, 1953. p. 21.

of determining the capacities already possessed by individuals which reflect the purposes of general education. One promising effort is reflected by Diederich⁶ in proposing a comprehensive evaluation program in which he suggests a procedure for evaluating the "essential elements of a good life." He defines these as being:

1. Life-maintenance
2. A sense of worth or achievement
3. Friendly relations with others
4. A free society
5. Aesthetic experience
6. Meaning

In looking back over these suggestions, it may be noted that we have emphasized that transmission of qualitative data is basic because general education is not the sum total of sporadic forays from the fields of specialization into the humanities.

We have emphasized the need for a continuity of contact between counselors and students and between counselors in the high school and counselors in the college, and also the need for recognition of the flow of learning experiences from high school into college. Since general education must be built through the flow of experience and not by layers of unrelated and perhaps repetitious experiences.

We have emphasized the need for a clarification of purpose so that our evaluations are on the basis of the student's ability *to do*, not of his *having done*.

The achievement of proposals such as these will not come about easily. The Michigan College Agreement and the Illinois and Minnesota procedures offer promise, but their success depends on the resoluteness of college and high school personnel. Local and district committees for articulation contribute much to sensitization to the needs for articulation. The effort, however, requires state and, perhaps in the New York and other metropolitan areas, inter-state co-operation of high schools and colleges. It is unfortunate that examples of such groups dealing with high school-college relationships are so rare. Perhaps this discussion may add to the impetus to assume further responsibilities for the wider action which is required.

Theodore D. Rice is Professor of Education at New York University, New York City.

⁶ Diederich, Paul B., "Planning a Comprehensive Evaluation Program." In American Council on Education Studies, Series 1, Vol 15, No. 46, April 1951, pp. 58-67.

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